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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,030	08/16/2006	Kenichi Suzuki	018842.1503	9364

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EXAMINER

JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

NOTIFICATION DATE	DELIVERY MODE
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08/05/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/598,030	Applicant(s) SUZUKI, KENICHI	
	Examiner Chen-Wen Jiang	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20061220</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2003291633) in view of Shimoda et al. (JP 2002147819).

Suzuki et al. disclose a vehicle air conditioner system as shown in Fig.1. The system comprises a first compression mechanism with fixed speed drive 5, a second compression mechanism with variable speed drive 3, evaporator exit air temperature sensor 41, a drive source change control means of the compressor, an electric-motor control means, a cooler for a refrigerating cycle, a number-of-rotations detection means for the motor for vehicles, and a target number-of-rotations calculation means for the electric motor. It provides changes from the state where the compressor is not driven to the simultaneous drive, from the independent drive to the simultaneous drive, or from the simultaneous drive to the independent drive. The controller

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includes a first target evaporator temperature T_{off1} and second target evaporator temperature T_{off2} . Referring to Fig.9, evaporator exit air temperature is controlled, when the evaporator exit air temperature exceeds the second target temperature T_{off2} then the second compression drive is inputted. The second compression drive is stopped when the evaporator exit air temperature less than the first evaporator target temperature T_{off1} . Suzuki et al. discloses the invention substantially as claimed with fixed speed drive and variable speed drive to single compressor unit. Suzuki et al. disclose the compressor comprise a control of rotational speed with inverter. It is well known in the art to stop the compressor when the capacity of the compressor is less than a predetermined value. However, Suzuki et al. does not disclose fixed speed compressor and variable speed compressor. Shimoda et al. discloses fixed speed drive and variable speed drive to drive separate compressor in the same field of endeavor for the purpose of providing compressed refrigerant in the refrigeration system instead of single unit. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the same control method of Suzuki et al to the apparatus of Shimoda et al. to control the evaporator capacity.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2004/0118135) in view of Ohta et al. (U.S. Patent Number 6,644,055).

Lee et al. disclose an air conditioning system as shown in Fig.2. In one embodiment, the system comprises a fixed capacity compressor 56 and a variable speed compressor, room temperature sensor 92, target temperature T_o , first predetermined temperature T_1 , second predetermined temperature T_2 and a control unit 96. Lee et al. discloses the invention substantially as claimed with the controller control based on the room temperature and target

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temperature and predetermined temperature. However, Lee et al. does not disclose the control using evaporator exit air temperature. Ohta et al discloses the control can be based on the target evaporator which is calculated from the target room temperature. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the control of Lee et al. with evaporator exit air temperature in view of Ohta et al so as to control the compressor operation with alternative method.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chen-Wen Jiang/

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Primary Examiner, Art Unit 3744